

Amendments to Drawings

The attached sheet includes amendments to Fig. 1 and replaces the original sheet of Fig.

1. The amendments to Fig. 1 are for clarification purposes only and do not introduce new subject matter. Accordingly, it is respectfully requested that the amendments to Fig. 1 be accepted by the Examiner.

Attachment: Replacement Sheet, Fig. 1

REMARKS

The present response amends Fig. 1 of drawings. No claims have been amended, canceled, or added. Claims 1-8 remain pending in the captioned case.

Objection the Drawings

An objection was lodged against the drawings for informalities. In response thereto, Fig. 1 has been amended to descriptively label the boxes as requested by the Examiner. Accordingly, Applicants respectfully request removal of this objection.

Section 112, First Paragraph, Rejection

Claims 1-8 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Applicants respectfully disagree as set forth below.

With regard to claim 1, the Office Action alleges that the specification does not disclose or teach the corresponding structures of materials to enable one skilled to make and/or use the invention. In response thereto, Applicants wish to note that the specification does not need to disclose or teach. Instead, the specification “preferably omits what is well known in the art.” *In Re Buchner*, 929 F.2d 660, 661 (Fed. Cir. 1991); *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367 (Fed. Cir. 1986). Thus, instead of the standard being to disclose or teach corresponding structures or materials, the standard test for enablement is whether one skilled in the art could make or use the invention from that which is disclosed without undue experimentation. MPEP 2164.01; *United States v. Teletronics, Inc.*, 857 F.2d 778 (Fed. Cir. 1988). The only purpose of the specification is for direction and guidance to a skilled artisan. MPEP 2164.01(a); *In Re Wands*, 858 F.2d 731 (Fed. Cir. 1988). If the level of one of ordinary skill is quite high and the level of predictability in the art is also high, the amount of experimentation needed to make or use the invention might be quite low, even if the specification provides minimal direction and guidance. See factors under MPEP 2164.01(a).

In the instant specification, what is described is a controller 7 that works in conjunction with a source 1 or transmitter 2 (Specification -- pg. 3, lines 26-31). A means "can be provided for measuring the transmission characteristics" of waveguide 3 (Specification -- pg. 5, lines 1-2). The means can be, for example, an evaluation means 8 that "detects incorrectly transmitted data" (Specification -- pg. 6, lines 3-4). The evaluation means 8 thereby detects data transmitted in waveguide 3 and "signals this to the controller [7] which thereupon reissues the data" (Specification -- pg. 6, lines 4-5).

Alternatively, a microcontroller can be used for "storing particular events such as errors, or also an exceeding of limiting values" (Specification -- pg. 6, lines 19-21). The microcontroller can be connected to a display for displaying "certain operating conditions or operating parameters" (Specification -- pg. 6, lines 23-24). Thus, transmission errors, signal-to-noise differences, bit error rates, etc. can be displayed (Specification -- pg. 6, lines 25-26). Depending on what is displayed, an operator can then manually adjust the controller 7 output (i.e., the controller signaling).

Another means can be used as a value setting means for setting the desired value and optionally adapting the setting of the desired value to, for example, the output of the evaluation means or what is presented on the microcontroller display (Specification -- pg. 5, lines 18-19). Accordingly, an evaluation means or display takes readings of transmission characteristics across waveguide 3, provides input to a controller that has a value setting means for dynamically setting a signal therefrom to that of a target value or "desired value" (Specification -- pg. 4, lines 1-2). The value setting means can be an encoding means, for example, and the desired value can be the target transmission quality, bit error rate, and signal-to-noise difference (Specification -- pg. 5, lines 20-22).

Depending on where the units (i.e., source 1 and sink 6) are relative to each other and the overall integrity of the waveguide, the transmission value or characteristic can vary. Regardless, a targeted value or desired value is deemed desirable by taking readings on the evaluation means and providing that outcome to a controller 7. Controller 7 can then adjust using, for example, feedback to set a desired value output based on feeding that desired value selectively to either

the data source 1 or transmitter 2. There are multiple ways in which to set the desired value such as, for example, fuzzy controllers, microcontrollers, or dedicated circuitry that responds to the output of an evaluation means that can simply be a comparator which compares the outcome from waveguide 3 to a reference value, for example (Specification -- pg. 7, lines 2-5).

Certainly a skilled artisan need not apply undue experimentation when following the directives of the present specification. Accordingly, Applicants assert that claim 1 complies with the enablement requirement in that the specification does disclose structures, logic, microcontroller, etc. that set a desired value outcome from a controller based on readings taken from an evaluation means or presented on a display screen.

With regard to claim 2, Applicants assert that the present specification does disclose to a skilled artisan without undue experimentation how a controller can change the data rate or package size of data transmitted across waveguide 3 based on readings taken from evaluation means 8 or presented on a display. For example, a skilled artisan would certainly know that clock rates can be changed and the package size or size of bit groupings (or packets) can change depending on readings taken from means 8 and presented to controller 7, which regulates or modulates based on those readings. Certainly as demonstrated by the references cited herein, modulation is a well known technique, except modulation in this case is controlled through the outcome from evaluation means 8 or through a user input to controller logic hardware or software programmed on a microprocessor or microcomputer.

With regard to claim 3, Applicants assert that the present specification complies with the enablement requirement. Data rates can easily change based on a change in the sampling clock which forwards such data rates, as well known to a skilled artisan when directed by the present specification. Importantly, however, the data rates are changed and, more specifically, the stored data is issued at different data rates depending on readings taken from evaluation means 8.

With regard to claim 4, the desired value setting means is disclosed to a skilled artisan as any hardware or software, fuzzy logic, circuitry, or microcontroller that receives an input from, for example, a user or evaluation means 8 and thereby provides a corresponding output for

setting a value of that output to a desired amount or value. The desired value can be nothing more than, for example, a regulated feedback value set by the comparison between the signal strength or bit rate within waveguide 3 and a reference signal strength or bit rate to which means 8 makes the comparison, and adjusts its output to controller 7 accordingly. The desired value can be the value of the reference value, for example. Alternatively, the desired value can be a value stored in memory of a microcontroller or a bias/reference value placed on the input to circuitry of controller 7. All of the various alternatives would certainly be known to one skilled in the art when reviewing the present specification, and a skilled artisan need not apply any undue experimentation when making or using the claimed invention.

With regard to claims 5 and 8, it is clear throughout the present specification what is meant by evaluation means and, in fact, evaluation means 8 is set forth in the drawings as well as the written text of the specification. Moreover, with respect to claim 8, forming a desired value of a data rate or data package size is readily apparent to a skilled artisan for the reasons discussed above.

For at least the reasons stated above, Applicants believe claims 1-8 fully comply with the enablement requirement of 35 U.S.C. § 112, first paragraph. Accordingly, Applicants respectfully request removal of this rejection.

Section 112, Second Paragraph, Rejection

Claims 1-8 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicants respectfully disagree as set forth below. The requirement of the first and second paragraphs of 35 U.S.C. 112 are separate and distinct. The mere fact that a claim is rejected for a faulty written description or non-enabling disclosure does not render that claim indefinite under 35 U.S.C. § 112, second paragraph. Instead, a rejection for indefiniteness must be based on the claim not particularly pointing out and distinctly claiming the invention. MPEP 2173. Claim breadth is not indefiniteness, however. MPEP 2173.04; *In Re Miller*, 441 F.2d 689 (CCPA 1971).

With regard to claim 1, a rejection was lodged against the terms “controller signaling, by means of a desired value, a predetermined data rate or package size . . .” Applicants believe the rejected terminology connotes standard and customary meanings as that of a controller that sends a signal for controlling a data stream. The signal is sent selectively to either the data source or the optical transmitter. The signal emitted from the controller is targeted to be one that controls the source/transmitter to produce a particular streaming value. That streaming value output from the source/transmitter is known as a “desired” value. *See, e.g.,* present specification -- pg. 5, lines 18-24. Thus, the controller signaling or signal output from the controller controls the data stream so that the data stream is placed at a desired value, and that value can be either the data rate or the package size.

With regard to claim 2, the term “predetermined package size” is alleged to be indefinite. In response thereto, it is noted that a desired value can be a value associated with the controlled data stream. For example, that desired value can be the package size. It is well known to a skilled artisan that a package size is a group of bits, for example, placed into a package, packet, or frame. That package is also sometimes referred to as a payload. Surrounding the payload is a header and a trailer. The size of the payload or package is controlled by the controller, and optimally placed at a desired value of a predetermined package size.

With regard to claim 3, it was alleged that the phrase “issuing stored data at different data rates” is unclear. Specifically, the Examiner is unsure whether the controller controls the data rates or whether the controller controls the transmitter that transmits the data at different data rates. In response thereto, claim 3 makes clear that in the embodiment claimed, it is the controller that “by itself formats and converts the data” (Specification -- pg. 3, line 30). Thus, the controller itself can perform the encoding, according to this embodiment, and perform the data transfer operations at different rates (speeds), and the transmitter can operate passively to merely relay that data.

With regard to claim 8, the term “data package” is rejected as being indefinite. Applicants respectfully assert that the term “data package” is well defined in the present specification as a package of data, such as a payload, of a series of binary values that is

“packaged” between, for example, a header and a trailer containing information about that package. Thus, Applicants assert that the term “data package” is definite and clear as to its meaning pursuant to its description set forth in the present specification.

For at least the reasons stated above, Applicants believe claims 1-8 fully comply the requirements of 35 U.S.C. § 112, second paragraph. Accordingly, Applicants respectfully request removal of this rejection.

Section 102 Rejection

Claims 1, 2, and 8 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,535,033 to Guempelein et al. (hereinafter “Guempelein”). Applicants respectfully traverse this rejection. The standard for “anticipation” is one of fairly strict identity. A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); MPEP 2131. Furthermore, anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, as arranged in the claim. *W.L. Gore & Assocs. V. Garlock*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983). Using these standards, Applicants submit the cited art fails to disclose each and every element of the currently pending claims, some distinctive features of which are set forth in more detail below.

Guempelein does not teach or suggest a controller for signaling a predetermined data rate or package size either to the data source or the optical transmitter (claim 1); or for converting the data of the data source to a predetermined data rate or to a predetermined package size (claim 2); or for determining transmission characteristics of a data path, forming a desired value of a data rate or data package size, setting a data rate or data package size, and/or transmitting a data stream at the set data rate or data package size (claim 8). Each of the present independent claims describes a controller that controls a data stream sent across a data path according to a desired value. For example, the controller can signal the desired value as a predetermined data rate or package size by, for example, converting the data stream to the

predetermined data rate or predetermined package size before forwarding the data stream across the data path. The controller thereby determines the transmitting characteristics of the data path, forms a desired value of the data rate or data package size, sets the data rate or data package size at, for example, a desired value, and the controller can then transmit the data stream at the set data rate or data package size.

The only passage in Guempelein that relates in any way to a controller as recognized in the Office Action is modulator unit 5. Modulator unit 5 simply modulates the data source 6 (Guempelein -- Fig. 1; col. 2, lines 40-41). Nowhere in Guempelein is there any mention that modulator unit 5 produces a signal at a desired value, much less the desired value being a data rate or data package size as presently claimed. Instead, Guempelein just simply modulates the data source and is purposely silent on whether modulator 5 changes the data rate or the package size of the data stream before forwarding the data stream onto the data path 1 (Guempelein -- Fig. 1).

Absent any suggestion for signaling a data rate or package size, or converting the data source to a differing data rate or package size, Applicants assert that Guempelein does not anticipate present independent claims 1, 2, and 8. Accordingly, Applicants respectfully request removal of this rejection.

Section 103 Rejection

Claims 4, 6, and 7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Guempelein. Claim 3 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Guempelein in view of U.S. Patent No. 5,477,366 to Moss et al. Claim 5 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Guempelein in view of U.S. Patent No. 5,659,368 to Landis.

While Applicants assert that dependent claims 3-7 are patentably distinct for at least the same reasons as their respective base claims 1, 2, and 8 discussed above, several of the dependent claims are also separately patentably distinct as set forth in more detail below.

Guempelein does not teach or suggest a desired-value setting means (claim 4) or a device that is self-learning (claim 7). As to claim 4, Guempelein merely describes modulating a data source, but does not make any mention as to how the modulation occurs, what is the target modulation, or anything about the signals sent to the modulator to produce a desired outcome. A skilled artisan would not be motivated to arrive at the subject matter of claim 4 of setting a desired value according to transmission characteristics since Guempelein makes no suggestion of either measuring the transmission characteristics or setting a desired value therefrom.

As to claim 7, it is impossible for Guempelein to be self-learning. Self-learning requires some form of measurement, feedback, and control based on that feedback loop mechanism. Guempelein describes modulation and does not make any mention of performing measurement as a stimulus to how much to modulate or even what parameters are being modulated.

For at least the foregoing reasons, Applicants respectfully request removal of this rejection.

CONCLUSION

The present amendment and response is believed to be a complete response to the issues raised in the Office Action mailed August 29, 2006. In view of the remarks herein, Applicants assert that pending claims 1-8 are in condition for allowance. If the Examiner has any questions, comments or suggestions, the undersigned attorney earnestly requests a telephone conference.

No fees are required for filing this amendment; however, the Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment, to Daffer McDaniel, LLP Deposit Account No. 50-3268.

Respectfully submitted,
/Kevin L. Daffer/
Kevin L. Daffer
Reg. No. 34,146
Attorney for Applicant(s)

Customer No. 35617
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